EARTH SCIENCE™
GROWTH ESSENTIALS

Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **1-Step Lawn Thickener**
Formula: Grass Seed + Calcium Sulfate Dihydrate + Dairy Manure Digestate + Calcitic Limestone + Polymer Coated Urea Fertilizer + Sulfate of Potash Fertilizer + Anionic Polyacrylamide
CAS No.: N/A
Recommended Use: Grass Seed & Fertilizer

Company Identification: **Encap, LLC**
3921 Algoma Road
Green Bay, WI 54311
Phone: (877) 405-5050

2. HAZARDS IDENTIFICATION

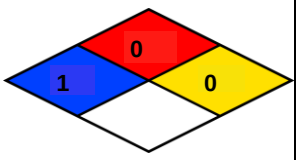
HMIS Classification

Health Hazard:	1
Chronic Health Hazard:	-
Flammability:	0
Physical Hazards:	0
Personal Protection:	E

(Safety glasses, gloves, and dust respirator)

NFPA Rating

Health Hazard:	1
Fire:	0
Reactivity Hazard:	0
Special Hazard:	None



GHS Labeling
Symbol: Exclamation mark
Signal Word: Warning

Hazard Statements:

H303	May be harmful if swallowed
H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation

Precautionary Statements:

P 261	Avoid breathing dust
P 102	Keep out of reach of children

Hazards Not Otherwise Classified: Unknown

OSHA Hazards
No known OSHA hazards

Target Organs
Skin, eyes, and respiratory system.

Potential Immediate Health Effects
Inhalation: May cause respiratory tract irritation.
Skin: May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May cause gastrointestinal tract irritation, disorder/damage. Intestinal obstruction may occur if the material hardens.

3. COMPOSITION

Chemical Identity:	Calcium sulfate dihydrate	24.5%
Common Name:	Gypsum	
CAS No.:	10101-41-4	
Chemical Identity:	Polymer coated urea	20.4%
Common Name:	ESN Urea	
CAS No.:	57-13-6	
Chemical Identity:	Dairy Manure Digestate	18.7%
Common Name:	Dairy Manure Digestate	
CAS No.:	NA208	
Chemical Identity:	Grass Seed	17.3%
Common Name:	Grass Seed	
CAS No.:	NA816	
Chemical Identity:	Calcium Carbonate	15.5%
Common Name:	Calcitic Limestone	
CAS No.:	471-34-1	
Chemical Identity:	Potassium Sulfate	2.8%
Common Name:	Sulfate of Potash	
CAS No.:	7778-80-5	
Chemical Identity:	Anionic Polyacrylamide	0.8%
Common Name:	Anionic Polyacrylamide	
CAS No.:	9003-05-8	

4. FIRST AID MEASURES

EYE:
Symptoms: May cause eye irritation.
Irrigate immediately. If this product contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Seek medical attention if needed.

SKIN:
Symptoms: May cause skin irritation.
Wash skin immediately rinse skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Seek medical attention if needed.

INHALATION:
Symptoms: Respiratory tract irritation.
Fresh air. If a person breathes in large amounts of this product, move to fresh air at once. Seek medical attention if needed.

INGESTION:
Symptoms: May cause gastrointestinal tract irritation, disorder/damage. Intestinal obstruction may occur if the material hardens.
Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Drink plenty of water. If needed, seek medical attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
A fine water spray, fog, CO_2 or dry chemical.

Unsuitable Extinguishing Media
None known.

Special Protective Equipment for Fire-Fighters
No special protective equipment required. Note: Product may render surfaces slippery.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Remove sources of ignition if this material is stored or handled in a dry state.

Environmental Precautions
Prevent product from entering drains.

Methods and Materials for Containment and Clean-up
Contain spill, scoop up excess, apply suitable absorbent material and dispose of in an appropriate container. Do not flush with water. Sweep spilled substance into containers; avoid generating dust. Reuse if not contaminated.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with eyes. Avoid formation of dust. Provide appropriate exhaust ventilation at places where dust is formed.
Recommended Conditions for Storage
Store in a cool dry place. Do not freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

	CAS No.	ACGIH TLV	OSHA/PEL
Grass Seed	NA816	unknown	unknown
Dairy manure digestate	NA208	unknown	unknown
Calcium carbonate (Calcitic limestone)	471-34-1	3 mg/m^3 resp.	5 mg/m^3 resp.
Calcium Sulfate Dihydrate (gypsum)	10101-41-4	10 mg/m^3	15 mg/m^3
Polymer Coated Urea Fertilizer (ESN)	57-13-6	10 mg/m^3	10 mg/m^3
Potassium Sulfate Fertilizer	7778-80-5	unknown	unknown
Anionic Polyacrylamide	9003-05-8	unknown	unknown

Engineering Controls
Local exhaust ventilation recommended. Running water should be available in case material gets in eyes.

Personal Protective Equipment

Respiratory Protection
If dust becomes airborne, a NIOSH (US) or CEN (EU) approved respirator for dusts is recommended.

Hand Protection
None required. Protective gloves recommended.

Skin and Body Protection
Long sleeves or lab coat and long pants are recommended.

Eye Protection
NIOSH (US) or CEN (EU) approved safety glasses with side shields, goggles, or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Mixture of brown granules, green granules, seed, and tan granules
Odor:	Earthy
Odor threshold:	Unknown
pH:	Unknown
Melting Point:	N/A
Freezing Point:	Unknown
Evaporation Rate:	0
Flammability:	Not flammable
Explosion Limits:	Unknown
Vapor Pressure:	N/A
Vapor Density:	N/A
Specific Gravity:	Unknown
Solubility in Water:	Low
Partition coefficient:	Unknown
Auto-ignition temp.:	Unknown
Decomposition temp.:	Unknown
Viscosity:	N/A
Other:	Unknown

10. STABILITY AND REACTIVITY

Reactivity: Non-reactive under recommended storage conditions. May react with strong oxidizing or reducing agents, aluminum (at high temperatures), and diazomethane.

Chemical Stability: Stable under recommended storage conditions. Avoid excess sources of ignition, heat, and incompatible materials. Dust suspended in air is readily ignited.

Conditions to Avoid: Large amounts of airborne dust.

Hazardous Decomposition Products: Thermal decomposition may produce CO, CO_2, oxides of sulfur, oxides of calcium, oxides of nitrogen, and hydrocyanic acid.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure
Eyes, skin, ingestion and inhalation.

Potential Health Effects

Inhalation: May cause respiratory tract irritation.
Skin: May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May cause gastrointestinal tract irritation, disorder/damage. Intestinal obstruction may occur if the material hardens.

Acute Toxicity
LD50 Oral - rat - 8,471 mg/kg (urea)

Reproductive Toxicity
No data available.

Germ Cell Mutagenicity
No data available.

Specific target organ toxicity - single exposure
Adverse health effects are not expected under normal use.

Specific target organ toxicity - repeated exposure
Adverse health effects are not expected under normal use.

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. IARC = International Agency for Research on Cancer

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by ACGIH. ACGIH = American Conference of Industrial Hygienists

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP. NTP = National Toxicology Program

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA. OSHA = Occupational Safety and Health Administration

12. ECOLOGICAL INFORMATION

Toxicity
Acute LC50 - Fish- Rohu - *Labeo rohita* - Egg 66,800 to 70,500 ug/L - 96 hr (urea)
Acute LC50 - Fish - Mozambique tilapia - *Tilapia mossamibca* 22,500 ug/L - 96 hr (urea)
Acute LC50 - Fish - Bleak - *Alburnus alburnus* - 1,692.4 mg/L - 96 hr (Potassium Sulfate)
Acute LC50 - other aquatic organisms - > 1,000 mg/L- 96 h (Potassium Sulfate)

Persistence and Degradability
Inherently biodegradable.

Bioaccumulative Potential
Does not bioaccumulate.

Mobility
Water contaminating.

PBT and vPvB Assessment
Does not bioaccumulate.

Other Adverse Effects
Large amounts released to water systems may harm aquatic plant and animal life.

13. DISPOSAL CONSIDERATIONS

May be disposed of as an inert solid in sanitary landfill or by other procedures in accordance with all federal, state and local regulations. May be used as a supplement on land and on some agricultural products.

14. TRANSPORT INFORMATION

DOT (US)
This material is not regulated by the DOT.

IMDG
This material is not regulated by the IMDG.

IATA
This material is not regulated by IATA.

15. REGULATORY INFORMATION

OSHA Hazards
None of the chemicals in this product are listed as highly hazardous by OSHA.

DSL Status
All components with CAS numbers are specified on the Canadian Domestic Substance List (DSL).

SARA 302 Compounds
No chemicals in this material are subject to SARA Title III, Section 302 reporting.

SARA 313 Compounds
No chemicals in this material are subject to the reporting requirements of Section 313 of SARA.

SARA 311/312 Hazards
No chemicals in this material are subject to Section 311/312 of SARA.

Massachusetts Right To Know
Limestone and gypsum listed by the Massachusetts Right to Know Act.

New Jersey Right To Know
Limestone and gypsum are listed by the New Jersey Right to Know Act.

Pennsylvania Right To Know
Limestone and gypsum are listed by the Pennsylvania Right to Know Act.

Rhode Island Right To Know
Limestone and gypsum are listed by the Rhode Island Right to Know Act.

California Proposition 65
This product contains a chemical known to the state of California to cause cancer: Residual Acrylamide.

16. OTHER INFORMATION

No data is available, per 29 CFR 1910.1200(d)(b); health hazards are based upon all of the components which make up the mixture.

The above information is believed to be correct, but is not purported to be all-inclusive and should only be used as a guide. Because data, safety standards, and regulatory inputs are subject to change, no warranty, guarantee, or representation with respect to the completeness or continuing accuracy of the information contained in this document is made. The user of this product must decide what safety measures are necessary to safely use this product; the conditions of handling and use, or misuse, are beyond the control of Encap, LLC. The user is also responsible to determine its environmental regulatory compliance obligations under any applicable federal or state laws.

MSDS Preparation History

Original	**Preparer**
Sept 2019	Encap LLC staff

Updates or Revisions

Update (U) or Revision (R)	Update or Revision Number	Date	Preparer